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Citation style: Brosch Anna. (2015). The role of multimedia in cultivating Polish culture and tradition in early school education. W: B. Pituła, A. Waligóra-Huk (red.), "Cultivating and forming regional traditions by the Visegrad Group teachers" (S. 133-142). Katowice : Wydawnictwo Uniwersytetu Śląskiego.

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Abstract: Multimedia is the multi dimensions of media, which can be an amalgamation of text, sound effects, light, animated figures, still images, videos and interactive content forms. Multimedia plays a very important role in assisting students in learning processes. The present contribution aims to identify the role of different types multimedia devices and their positive influence in the early education. Multimedia is present in children's everyday life, thus its management is considered as a necessity by the specialists. The relation of multimedia with education is very complex — from speaking about teaching with multimedia to multimedia education. This article analyzes the openness of primary school for use of multimedia in the learning process, especially in cultivating regional culture and tradition. The study was conducted in the January 2015 among 12 teachers at first level of education.
Keywords: early education, culture and tradition, multimedia

Introduction

As the new information technologies are being transformed from expensive gadgets into standard classroom equipment, their extraordinary multimedia capabilities are rapidly becoming a routine part of learning environments (Slawson, 1993). Interactive multimedia is one of the most promising technologies of the time and has the potential to revolutionize the way of working, learning, and teaching (Staub & Wetherbe, 1989). With the continued development of knowledge societies, the influence of new technologies on the creation of knowledge is growing. Not only are the rate of production and the volume

of information continuing to grow exponentially, but information is also less and less dependent on text-based transmission and increasingly includes audio, graphic, and visual supports through a variety of media. Therefore, it plays an important role in making teaching and learning process more effective and successful (Strykowski, 2003, p. 116).

Multimedia involves different media, which have all existed before, including text, video, sound, graphics, animation and may or may not involve computers. Multimedia can be used in a range of formats from a simple PowerPoint slide show to a complex interactive simulation, therefore the combination of these simple elements makes it a powerful new educational tool (Bednarek, 2006, p. 46). The old text-based approach to learning is being superseded by an approach which combines audio and color video in a much more exciting way (Barker & Tucker, 1990). With the capability of creating a more realistic learning context multimedia has the potential to create high quality learning environments and thus should be more effective than traditional classroom lecture, and improves students' attitudes toward the learning material. Multimedia may improve learning by allowing to use the most effective medium to present specific information.

With formal education traditionally emphasizing teaching more than learning, education system in Poland has focused on the transfer of information and knowledge from the teacher to the learner. Technology is one of the driving forces removing teaching from "time dependent, location dependent, and situation dependent" settings (Lattas, 2009, p. 85). With the multiplication of digital media, sources of information, knowledge and values are becoming more diversified and accessible beyond the confines of formal education systems.

Accordingly, the media have enormous potential for the transmission and cultivation culture and traditions in early school education. As it offers a unique possibilities in transmitting content and information, where direct participation of such small children is impossible. Irrespective of the community, location around the world and level of technological advancement, tradition is passed on to the successive generation as crucial element of culture, which is virtually indispensable for the community's cultural survival. There is no doubt, that tradition is associated of belonging to a given community (Głowacka-Grajper, 2009, p. 36). Therefore, the purpose of educational institution is to ensure that the existing store of culture will be preserved by passing it onto the subsequent generations. All societies in order to attain socialization of their next generations have created their own cultural and social experience (Schultz, 1996, p. 168).

Thus, multimedia should be a natural way of modern teaching that is methodically convenient for teachers and very attractive to the pupils. But to be able to perform teaching functions, multimedia should be correctly prepared and not only in terms of content, but visually as well.

Multimedia in early education

The global changes observed in the 21st century have created new needs, as well as a new concept of education and lifelong learning. Children who are now attending primary schools belong to the generation that was born in computerized world and have grown up surrounded by computers, video games, mobile phones, and the Internet. Therefore today's children learn, work, write, and communicate in a different way from previous generations and prefer watching than reading, indirect than direct communication and are more likely to meet online than in person (Palfrey & Gasser, 2008). Some researchers argue that not only children's behavior was changed, but their brains evolved as well, making them permanently and biologically different from their ancestors (Small & Vorgan, 2011). On the other hand, civilization and technological progress inevitably changes the living standard, the value of life and methods of education. As a consequence, pedagogical responses to these new challenges in the institutions of primary education are being sought for. The current research indicates that it is necessary to educate a child from an early age, because self-motivated and active learning takes place exactly at that age (Fullan, 2005, pp. 13—29).

There is no doubt, that primary level is an important stage in the child's educational life. As many studies have emphasized that children in the first level of education is characterized by fast physical and social development. Due to the increasing activity, they learn new behavior patterns and skills very easily (Stefańska-Klar, 2004). In other words, whatever is being taught must engage the learner as an active agent for meaning to emerge. In the deeper process of learning, the learner moves from the known to the unknown, making the known explicit to themselves and then enlarging that knowledge and understanding which he or she already possesses (Bruner, 1987). In the case of young children coming into school, teachers in the foundation stage know that they have to work with the known and the given to help their pupils to make sense of the world (Rogoff, 1992). If a teacher succeeds in framing a sound base and making the entire concept clear to a child, then in future the student will be able to grasp difficult thing easily. There is evidence that nutrition and cognitive stimulation in first stage of child's education is critical in forming the ability to future learning. This is particular relevant with regard to developing skills like creativity, flexibility and problems solving, skills that are coming more in demand in the knowledge economy. In our culture nearly all children have, from birth, extensive experience with film, television, and video (Kress, 1997; Bromley, 1996; Marsh & Hallet, 1999). The primary role of multimedia is learning by doing — pupils firstly see the objects and then learn. Multimedia may have unique capabilities to facilitate learning because of the parallels between multimedia and natural way of children learn, that is, through visual information

and imagery. Using interactive multimedia in the teaching process is a growing phenomenon. Multimedia plays a very important role in assisting students in learning processes. Therefore, it can be concluded that the multimedia enhance and enable students to learn in a more effective way. Multimedia tools provide a wealth of new ways to encourage children, explore issues, records views and communication from others. There are two major approaches to using multimedia in early education; first, pupils can learn "from" multimedia. Second, they can learn "with" multimedia.

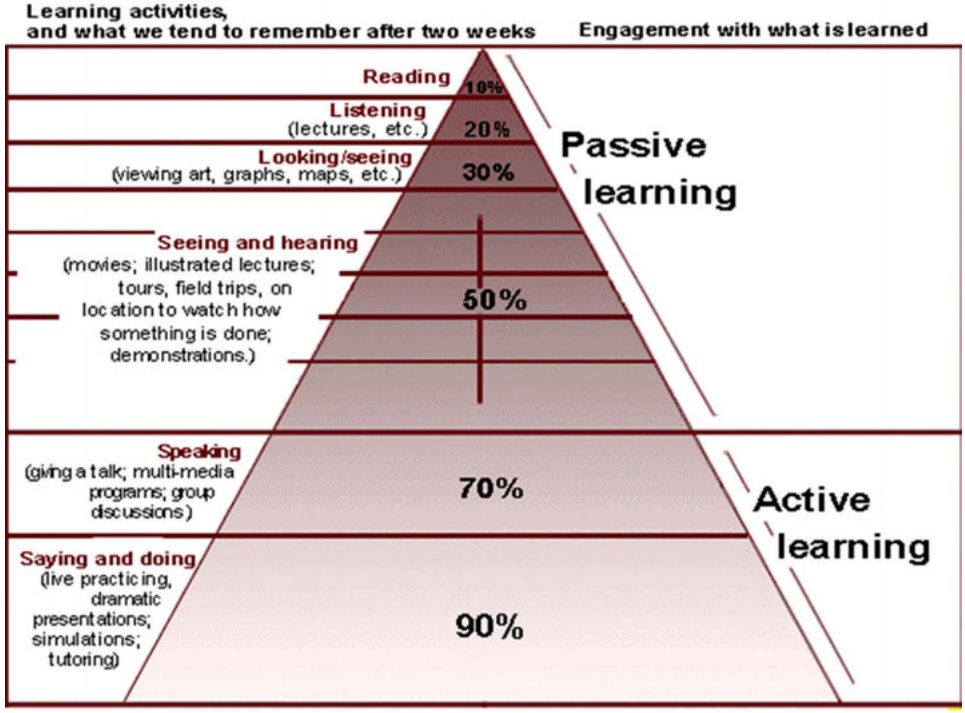

Figure 1. Different types of learning activities vs. the residual knowledge of a learner
Source: Edgar Dale. (1969). *Audiovisual method of teaching*. New York, p. 107.

Multimedia are necessary for an education in various ways, developing cross skills and competencies, efficient communication, solving problems, critical thinking, collaboration, and using technologies. Multimedia's capacity to deliver real time simulations through the use of video is a feature that elevated it beyond traditional text-based learning, and therefore could be viewed as a means of supplementing or preparing a student for real experiences. Multimedia could provide a solution where direct participation is impossible. Moreover, in most cases is believed to enhance user experience and result in easier and faster understanding of the information presented. Many studies have emphasized that whatever is be-

ing taught must engage the learner as an active agent for meaning to emerge. In the deeper process of learning, the pupils move from the known to the unknown, and then enlarging already possessed knowledge (Okoń, 2003; Bruner, 1987). Recent researchers have shown that significant increases in learning can be accomplished through the informed use of visual and verbal multimodal learning. Principles related to multimedia and modality are listed below:

1. Multimedia Principle: Retention is improved through words and pictures rather than through words alone.
2. Spatial Contiguity Principle: Students learn better when corresponding words and pictures are presented near each other rather than far from each other on the page or screen.
3. Temporal Contiguity Principle: Students learn better when corresponding words and pictures are presented simultaneously rather than successively.
4. Coherence Principle: Students learn better when extraneous words, pictures, and sounds are excluded rather than included.
5. Modality Principle: Students learn better from animation and narration than from animation and on-screen text.
6. Redundancy Principle: Students learn better when information is not represented in more than one modality — redundancy interferes with learning.

7(a). Individual Differences Principle: Design effects are higher for low-knowledge learners than for high-knowledge learners.

7(b). Individual Differences Principle: Design effects are higher for high-spatial learners rather than for low-spatial learners.

8. Direct Manipulation Principle: As the complexity of the materials increase, the impact of direct manipulation of the learning materials (animation, pacing) on transfer also increases (Mayer & Moreno, 2003; Ginns, 2005).

Specialists indicate five important media in education — direct human contact (face to face), text (including still graphics), audio, television and computing. The use of media tools and products has to achieve the following objectives:

— individualization of learning, especially through the possible use of digital media tailored to particular student;
— deepening learning, for example by different ways of illustration/simulation of phenomena otherwise inaccessible for student;
— facilitate learning through the use of various records of work. Thereby, the media may make it possible to make progress in the learning process.
— increase motivation for learning because of the attractiveness of media products, such as, for example, the audio-visual products;
— developing key skills and competencies, such as efficient communication, solving problems, critical thinking, collaboration, and the use of technologies;
— developing attitudes, including intellectual curiosity and responsibility;
— giving a background for a global perspective on the world (Bates, 1993).

In particular, education based on digital multimedia integrating graphics, text, audio and video software into a single unit is the most effective. Text has the most impact on the quality of the multimedia interaction, because it provides the important information and acts as the keystone tying all of the other media elements together. Sound is used to provide emphasis or to highlighting some information and enables teachers to present lots of information at once. Sound, if used creatively, becomes a stimulus to the imagination but used inappropriately may become a hindrance or cause annoyance. Video presents information by using the visualization capabilities. There is no doubt, that video provides new and exciting possibilities of transmission of information and knowledge. Moreover, it can stimulate interest and engagement of pupils. One of the most compelling justifications for video may be ability to elicit an emotional response from an individual. Animation is used to show changes in state over time, or to present information slowly to students so they have time to assimilate it in smaller chunks. Animations are primarily used to demonstrate an idea or illustrate a concept. Whereas video is usually taken from life, animations are based on drawings, pictures or graphics to provide the most creative possibilities for a learning session. Through animation in traditional stories provide a huge knowledge related to real context. Animations are highly engaging for young viewers and most students, even in the early years show a high level of media literacy and knowledge about animation. The computer-related literacy experiences of young children should involve a balance between open-ended activities and more closed learning activities (Segers, 2002). Computers do provide an environment in which children demonstrated more active interest and joy when using the computer programs. They also showed more concentration using the computer than watching. It was concluded that computers also appear to be highly motivating for children. They generally have very positive experiences on the computer and tend to stay on task for a long period of time (McCarrick & Li, 2007).

The use of multimedia in cultivating tradition in the light of the authors' own research

Based on the above literature review, it was important to explore the way how teachers in primary schools use multimedia to cultivating culture and tradition. The following empirical results are gathered in a survey carried in January of 2015 at several primary schools in Silesia region. This was a survey based on interview questionnaire that was addressed to 12 teachers at first level of education. The questionnaire covered a broad range of topics. In addition to the basic

school equipment with multimedia devices, respondents were asked to describe the ways of using them in the context of curricula.

As the study has shown, conveying cultural contents, and therefore teaching tradition by means of multimedia may assume the various forms — from simple text, sound, and animations, through the films to the use of computer programs. Transmission of tradition is based on two equal levels: action and speaking. The level of action is chiefly providing an example, practicing tradition, demonstrating how things are done and active participation in the creation of cultural system. In turn, the level of speaking is associated with instruction, explanation, and telling others about tradition and their own culture. Therefore, in transmission of cultural contents, the best effects are achieved through combination of these two levels. According to the teachers surveyed multimedia are excellent means to convey content which most students find boring when taught traditionally. It must be emphasized that in Poland, great importance is attached to the symbols of tradition that representing a certain level of abstraction and may be difficult to understand to children. Therefore, multimedia is helpful to explain the roots of social phenomena, beliefs, rituals or superstitions, as well as providing them with a material dimension. It makes the assignment of symbolic meanings easier. The key to successful transmission is to make young listeners interested in the topic. It should be noted that the Silesia is a multicultural area formed by influence of populations including the Polish, German, Czech and Jewish with strong sense of ethnic identity. Despite the cultural variety, Silesian people are really fond of their little homeland.

Film is recognized by teachers as a valuable tool that can be used to engage young people with topic of lesson and increase their overall motivation for learning. Film can help children to be more positive about the whole school experience. Showing films to children can help to broaden their pupils' minds. Film or video is used usually to present students with a real-world context, for example local history and changes over time. It is also used to show traditional Silesian songs and dances.

The Internet may offer a suitable site for publishing children's work on the school website, for viewing by parents and collaborating schools. Informational websites available through the Internet provide opportunities for children to learn about the region beyond their classroom. An interesting example is the website of the Castle Museum in Pszczyna. In addition to historical information, visitors can take a virtual tour of the castle.

The research has also shown that teachers have strong interest in multimedia presentation, which allows children to display text, images, animation, video and sound together in the form of a digital slideshow. In an increasingly visually oriented world, children's ability to use multimedia software may help them to make sense of the media that is a part of their daily lives. A data projector is an ideal way of ensuring that children and teachers can use the presentation

software in a whole-class situation. The teachers use a multimedia projector to show the children monuments and architecture of Silesia an therefore cultivate regional culture. Teachers utilize pictures, words, shapes, motions, colors and sounds into appealing combination which stimulates students to begin the process of thinking and developing input and to produce output as a result. A meaningful appealing combination helps to set up the situation, and the situation assists in digging up students' sense.

The combined range of multimedia tools enables the teacher and child to maintain a useful record of each child's journey from the unknown to the known in the form of an electronic portfolio, which engages the child's interest in his or her learning by increasing the transparency of progress records. An electronic or digital portfolio is a collection of the child's work, selected to demonstrate achievement and progress in a given area. As children learn to develop and maintain their own portfolios, they can select a representative range of materials reflecting their interests, their ongoing work and achievements, such examples of written work, photographs, projects related to regional culture and using drawing and paint software to create and edit designs. Multimedia tools and software may also provide opportunities for children to document, through audio or video or both, by recording significant classroom and life events, for example first day at school with the horn of plenty, celebrations and special days associated with Easter or Christmas traditions.

However, the surveyed teachers emphasize that often the use of multimedia in learning is difficult due to the large number of pupils per classes and also insufficient schools equipment with multimedia devices, especially TVs, CD players, computers and multimedia projectors. Therefore, teachers are forced to use the equipment devices in the common room or in the computer room, which makes conducting lessons quite difficult.

Conclusions

In the age of information revolutions, students are equipped with cell phones, laptops with wireless Internet and probably some other high tech gadgets. It is sometimes boring and uninteresting to present to them the course material on a board or direct rehearsal. The educational system may need to utilize and compete with the new Information and communication technologies and benefit from them. There are lots of possibilities of such utilization such as using animation to present some of the complex boring problems in a more appealing format. Such techniques are particularly useful for teaching kids within primary schools at early ages.

Finally, it is worth reminding ourselves how important moving-image education is to children in the modern world. Moving-image media have a unique capacity for the development of cultural understanding and citizenship. Watching programs and films made and set in regional culture can help develop an awareness of sameness that is essential to cultural understanding. Effective use of multimedia will become core elements of modern education. The multimedia elements will enable to students to understand the concepts being taught via audio and video. With traditional textbooks, what they could not comprehend via word and sentences are conveyed via multimedia. Tradition told with passion and in the way that is comprehensible for the young people may be something exceptionally interesting.

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